

**REMARKS**

This responds to the Office Action dated March 14, 2006.

Claims 1, 9, 21, 32, and 41 are amended; as a result, claims 1-45 are pending in this application.

**§102 Rejection of the Claims**

1. Claims 1, 9-12, 14, and 15 were rejected under 35 U.S.C. § 102(b) for anticipation by Hartley et al. (U.S. 6,076,015, "Hartley"). Applicant respectfully traverses the rejection. The Office Action fails to establish a *prima facie* case of anticipation because Hartley does not teach all of the elements presently recited or incorporated into the claims.

*Regarding claim 1:*

Claim 1 was amended to a form indicated to be allowable by the Examiner.

*Regarding claims 9-12, 14, and 15:*

Applicant cannot find in the cited portions of Hartley any teaching or suggestion of, among other things,

a sampling element coupled to the receiver and adapted to cause the receiver to obtain transthoracic impedance in response to an occurrence of a fiducial marker,

as recited in claim 9 and incorporated into claims 10-12, 14, and 15.

Applicant respectfully requests reconsideration and allowance of claims 1, 9-12, 14, and 15.

2. Claims 9-11, 20, and 32-34 were rejected under 35 U.S.C. § 102(e) for anticipation by Poore (U.S. Publication No. 2003/003291A1). Applicant respectfully traverses the rejection. The Office Action fails to establish a *prima facie* case of anticipation because Poore does not teach all of the elements presently recited or incorporated into the claims.

*Regarding claims 9-11, and 20:*

Applicant cannot find in the cited portions of Poore any teaching or suggestion of, among other things,

a signal processor adapted to detect fiducial markers in a signal indicative of the action of the heart, and wherein the signal processor also includes a receiver

adapted to obtain transthoracic impedance information responsive to the pulsed current stimulus; and a sampling element coupled to the receiver and adapted to obtain transthoracic impedance in response to an occurrence of a fiducial marker,

as presently recited in claim 9 and incorporated into claims 10, 11, and 20.

*Regarding claims 32-34:*

Applicant cannot find in the cited portions of Poore any teaching or suggestion of, among other things,

a signal processor in communication with the electrodes and adapted to detect fiducial markers in a signal indicative of an action of a heart, and wherein the signal processor also includes a receiver adapted to obtain transthoracic impedance information responsive to the current stimulus; and means for sampling the transthoracic impedance in response to the occurrence of a fiducial marker in the signal indicative of the action of the heart,

as presently recited in claim 32 and incorporated into claims 33 and 34.

Applicant respectfully requests reconsideration and allowance of claims 9-11, 20, and 32-34.

3. Claims 21, 23-26, 28, 41 and 43-45 were rejected under 35 U.S.C. § 102(c) for anticipation by, or, in the alternative, under 35 U.S.C. 103(a) as obvious over, Baura et al. (U.S. 6,561,986, "Baura"). Applicant respectfully traverses the rejection. The Office Action fails to establish a *prima facie* case of anticipation or obviousness because Baura does not teach or suggest all of the elements presently recited or incorporated into the claims.

Applicant cannot find in the cited portions of Baura any teaching or suggestion of, among other things,

sampling a voltage across the thorax region while applying the predetermined pulsed current stimulus, such that a component of the voltage from a stroke volume of the heart is substantially constant,

as presently recited in claims 21 and 41 and incorporated into claims 23-26, 28, and 43-45. Instead, Baura relates to calculating various parameters related to stroke volume,<sup>1</sup> and to

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<sup>1</sup> Baura, Abstract.

determining the stroke volume associated with a cardiac cycle of the subject.<sup>2</sup> Thus, Baura relates to determining the stroke volume, in contrast to sampling a voltage at a substantially constant stroke volume according to the subject matter recited in claims 21 and 41.

Applicant respectfully requests reconsideration and allowance of claims 21, 23-26, 28, 41 and 43-45.

**Reservation of the Right to Swear Behind References**

Applicant reserves its right to swear behind any references which are cited in a rejection under 35 U.S.C. §§102(e) and 103/102(e). Statements distinguishing the claimed subject matter over the cited references are not to be interpreted as admissions that the references are prior art.

**Allowable Subject Matter**

Applicant acknowledges the allowance of claims 35-40.

Claims 2-8, 13, 16-19, 22, 27, 29-31, and 42 were objected to as being dependent upon a rejected base claim, but were indicated to be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 2-8 depend upon base claim 1, claims 13, 16-19 ultimately depend on base claim 9, claims 22, 27, 29-31 ultimately depend on base claim 21, and claim 42 depends on base claim 41. Applicant believes that the discussions for base claims 1, 9, 21, and 41 above has overcome the objection.

Applicant respectfully requests reconsideration and allowance of claims 2-8, 13, 16-19, 22, 27, 29-31, and 42.

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<sup>2</sup> Baura, col. 7 lines 6-8.

### CONCLUSION

Applicant respectfully submits that the claims are in condition for allowance, and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney at (612) 373-6965 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

JAEHO KIM ET AL.

By their Representatives,

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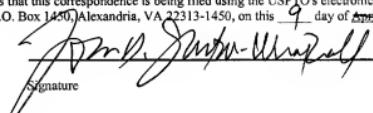
By

  
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Date 8-9-2006

**CERTIFICATE UNDER 37 CFR 1.8:** The undersigned hereby certifies that this correspondence is being filed using the USPTO's electronic filing system EFS-Web, and is addressed to: Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 9 day of August, 2006.

Name John D. Gurs

  
Signature